



National University of Modern Languages
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Computer Graphics

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Computer Graphics

Assignment # 2

TASKS

Understand glRecti() openGL function and use it in a graphical example. Due next Tuesday, include definition of glRecti(), code, and screenshot of example.

Answer:

The glRecti() function in OpenGL is used to render a filled rectangle by specifying the coordinates of two opposite corners. It takes integer values as parameters to define the rectangle's position in 2D space. This function is part of OpenGL's fixed-function pipeline and is commonly used for simple 2D drawing tasks.

Function Definition:

- glRecti() draws a filled rectangle within the current OpenGL context.
- It fills the rectangle using the currently active color, which can be set by functions such as glColor3f().
- The rectangle is defined by two diagonal corners, (x1, y1) and (x2, y2), with OpenGL automatically calculating the other two corners to complete the rectangle.

Example Code:

```
#include<Windows.h>
#include<GL\glut.h>

void myInit() {
    glClearColor(1.0, 1.0, 1.0, 0.0);
    glPointSize(5.0);
    glMatrixMode(GL_MODELVIEW);
    gluOrtho2D(0.0, 600.0, 0.0, 600.0);
}

void display() {
    glClear(GL_COLOR_BUFFER_BIT);


    glColor3f(0.0, 1.0, 1.0);

    glRecti(150, 150, 500, 400);

    glFlush();
}
```

```
int main(int argc, char** argv) {  
    glutInit(&argc, argv);  
    glutInitDisplayMode(GLUT_SINGLE);  
    glutInitWindowSize(600, 600);  
    glutInitWindowPosition(150, 150);  
    glutCreateWindow("Green Rectangle Example");  
    myInit();  
    glutDisplayFunc(display);  
    glutMainLoop();  
    return 0;  
}
```

Output:

 Green Rectangle Example

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